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Federal Communications Commission
Office of the Secretary

STAMP & RETURN

RM-11625

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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MAR 15 2011

Federal Communications Commission
Bureau / Office

In the Matter of)
)
Request for Temporary Waiver of Sections)
97.3(c)(2); 97.3(c)(5); and 97.307(f)(8) of the)
Commission's Rules to Permit Use in the)
Amateur Radio Service of Single Slot Time)
Division Multiple Access Telephony and Data)
Emissions)

To: **The Chief, Mobility Division**
Wireless Telecommunications Bureau
Via: **Office of the Secretary**

REQUEST FOR TEMPORARY WAIVER

ARRL, the national association for Amateur Radio, formally known as the American Radio Relay League, Incorporated (ARRL), by counsel and pursuant to Sections 1.3 and 1.925 of the Commission's Rules (47 C.F.R. §§ 1.3 and 1.925) hereby respectfully requests that the Commission temporarily waive Sections 97.3(c)(5) and 97.307(f)(8) of the Commission's rules insofar as those rules presently prohibit the use by Amateur Radio Service licensees of single time-slot Time Division Multiple Access (TDMA) technology, including digital voice and data emissions in Amateur allocations at VHF and above. This temporary waiver is sought on an expedited basis, and is necessary only until the final resolution of ARRL's contemporaneously filed Petition for Rule Making seeking modification of the same rule sections cited above. As good cause for the requested temporary waiver, ARRL states as follows:

1. Numerous narrowband UHF repeater facilities using multiple time slot TDMA repeaters and single-slot TDMA handheld digital transceivers have recently been established in the 70 centimeter (420-450 MHz) Amateur band. There are many of these

systems now in operation, most especially in the western part of the United States and in the New York City area, and as well in several Midwestern states. The legality of the use of these systems was drawn into question very recently in the context of a highly technical rule analysis in an Amateur Radio online publication discussed hereinbelow. This article created serious concern on the part of Amateur Radio Service licensees who have implemented these new digital, spectrum-efficient repeater systems. They did so with the understanding that they were in full compliance with the Commission's regulations governing permitted emissions, and all other technical rules in Part 97. ARRL's analysis of the matter, however, led to the conclusion that the present rules do not clearly permit single-slot TDMA emissions in the VHF and UHF Amateur Radio Service allocations. ARRL is therefore filing contemporaneously with this waiver request a Petition for Rule Making, proposing to amend Sections 97.3(c) (5) and 97.307(f)(8) of the Commission's rules, in order to permit Amateur Radio Service licensees to utilize single time-slot TDMA technology wherever multiple time-slot TDMA is authorized, in Amateur allocations at VHF and above.

2. The use of digital repeater systems in the Amateur Service is expanding in the United States. Some Amateur licensees use the D-Star or P-25 technology. Others have begun to utilize TDMA technology, an example of which is a Motorola TDMA system marketed commercially (to land mobile licensees) as "MotoTRBO". Motorola's TDMA product conforms to the Digital Mobile Radio (DMR) Tier 2 Standard (a published, open standard; *See*, ETSI TS 102-361, parts 1-4). It is two-slot TDMA technology (as to the *repeater*; the associated portable and mobile transceivers use single-slot TDMA

emissions). It is compatible with existing Amateur repeater channelization plans, and thus contributes to a gradual migration to digital communications in the Amateur Service.

3. The Motorola TDMA product specifies emission designators 7K60FXE in voice mode and 7K60FXD for data. The problem with this is that the “X” symbol in the second space defining the emission is not included in Section 97.3(c) in defining either “phone” (i.e. telephony) or “data”. Specifically, with respect to phone emissions, Section 97.3(c)(5) includes in the definition speech and other sound emissions having the symbols 1, 2 or 3 as the second symbol (and thus excluding the symbol “X”). Section 97.3 does not prohibit or permit the use of any specific emission. It simply lists what is included in the broad classifications of emissions authorized per Amateur band in Section 97.305, and as authorized by Sections 97.307 and 97.309 of the Amateur rules.

4. In September, 2010, an article appeared in an Amateur Radio online publication which addressed the use of “TDMA type APCO P-25 transceivers and repeaters” which were “originally intended for use on the UHF public safety (sic) band” (i.e. 450-512 MHz). The article, in question-and-answer format, asked whether emission type 7K60FXE is allowed in the Amateur bands, thus to permit the use of TDMA radios and repeaters in the Amateur 70 cm band. The author of the article concluded that, though Section 97.305 of the Commission’s rules authorizes MCW, phone, image, RTTY, data, SS, CW and test emissions in the entire 70 cm band, Section 97.3(c) of the Commission’s Rules does not include FXE among the “terms that are used for specifying emission types” with respect to either phone or data emissions. The author concluded that single slot TDMA in the Amateur Service is not presently authorized. This article has created widespread concern among Amateur Radio operators using the TDMA equipment

at present, and while the ARRL Petition for Rule Making is pending, some interim relief is justified in order to permit these efficient systems to continue to operate *pendente lite*.

5. Section 97.307(f)(8) of the Amateur Radio Service rules, lists additional data emissions permitted in the bands 6 meters and above. It reads as follows:

(8) A RTTY or data emission having designators with A, B, C, D, E, F, G, H, J or R as the first symbol; 1, 2, 7 or 9 as the second symbol; and D or W as the third symbol is also authorized.

Nothing in 97.307(f)(8) authorizes single time-slot TDMA either. In order to permit the use of single slot TDMA equipment in data mode pending ARRL's Petition for Rule Making in the VHF and UHF bands, temporary waiver of this Section is necessary, in addition to the waiver of Section 97.3(c)(5).

6. This situation is anomalous in that the Motorola TDMA repeaters, which employ multiple time-slot TDMA emissions, utilize an F7E or F7D emission, and therefore those repeaters can be used in the Amateur bands at and above 6 meters per Section 97.307(f)(8) of the Commission's rules.¹ However, the portable and mobile transceivers associated with the Motorola TDMA system utilize single time-slot transmissions and they therefore use an FXE or FXD emission because no other second symbol found in Section 2.201(d) of the Commission's rules (the table of emission designators) applies to those units. That the multiple time-slot TDMA repeaters are permitted but the associated portable or mobile units that are used with it are not allowed in the Amateur Service is illogical and is counter to the Commission's well-established intent to provide flexibility in the implementation of spectrum-efficient digital

¹ Section 97.3(c)(5) of the Commission's rules, because of the wording of that subsection, does not now permit F7E emissions. As the rule is proposed to be modified in the attached appendix, it would permit such emissions.

technologies in the Amateur Service. The spectrum-efficient, narrowband systems that are now in place using TDMA technology, and which are reportedly not causing interference, should be permitted to continue to operate while the Commission is considering the Petition for Rule Making that ARRL is submitting with this waiver request.

7. The Commission may waive a rule for good cause shown. 47 C.F.R. § 1.3.

Waiver is appropriate if special circumstances warrant a deviation from the general rule and such deviation would better serve the public interest than would strict adherence to the general rule. *Northeast Cellular*, 897 F. 2d 1164, 1166 (D.C. Cir. 1990). Generally, the Commission may grant a waiver of its rules in a particular case if the relief requested would not undermine the policy objective of the rule in question and would otherwise serve the public interest. *WAIT Radio v. FCC*, 418 F2d 1153, (DC Cir 1969); *Dominion Video Satellite, Inc., Order and Authorization*, 14 FCC Rcd 8182 (Int'l Bur. 1999). In *WAIT Radio*, it was held that even if the overall objectives of a general rule have been adjudged to be in the public interest, it is possible that application of the rule to a specific case may not serve the public interest if an applicant's proposal does not undermine the public interest policy served by the rule. 418 F. 2d at 1157. In discussing the treatment of requests for waivers of established rules, the court in *WAIT Radio* emphasized that the agency's discretion in applying general rules is intimately linked to the existence of "a safety valve procedure" to permit consideration of an application for exemption based on special circumstances. *Id.* Indeed, the court considered a rule most likely to be undercut if it does not take into account "consideration of hardship, equity, or more effective implementation of overall policy..." *Id.* at 1159. The Commission's waiver authority,

per Section 1.925 of the Commission's Rules, 47 C.F.R. § 1.925, allows the Commission to grant a waiver if it is shown that (a) the underlying purpose of the rule(s) would not be served or would be frustrated by application to the instant case, and grant of the requested waiver would be in the public interest; or (b) if there are unique or unusual factual circumstances in a specific case where application of the rule would be inequitable, unduly burdensome or contrary to the public interest, or the applicant has no reasonable alternative.

8. In this case, some Amateur Radio operators have adapted commercially available spectrum-efficient narrowband equipment for Amateur use, and it is working without any reported disruption of incumbent wider bandwidth analog equipment. More of them can be successfully coordinated without raising new coordination issues. The same equipment is in regular daily use by Part 90 licensees in the private land mobile radio service. In introducing this spectrum-efficient technology into the Amateur Radio Service, its initial adopters were not aware of the peculiarity that the Commission's Part 97 rules permitted the use of the two-slot TDMA repeaters but not the associated single slot TDMA portable and mobile units.

9. Strict compliance with the definitional rules in Section 97.3(c) of the Commission's rules and with the limited emissions permitted by Section 97.307(f)(8) would necessitate the removal of this equipment from service pending Commission action on a very minor rule change. The waiver in this case is necessary therefore to permit the continuation of emergency and public service communications via Amateur Radio using modern, spectrum efficient equipment on a temporary basis. It is suggested

that the strict application of the rule in this instance would be inequitable, unduly burdensome and contrary to the public interest.

9. ARRL would suggest the incorporation of a non-interference condition on the waiver, and accepts that the waiver would be in force only until final adjudication of its contemporaneously filed Petition for Rule Making on this same subject.

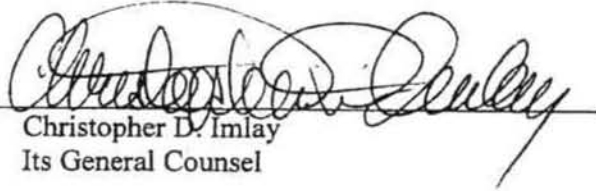
Therefore, the foregoing considered, ARRL, the national association for Amateur Radio, respectfully requests that the Commission temporarily waive Sections 97.3(c)(5) and 97.307(f)(8) of the Commission's Rules, so as to the use of single time-slot TDMA emissions where multiple time-slot TDMA emissions are permitted in the Amateur bands at and above 6 meters; that operation pursuant to such waiver be on a non-interference basis; and that TDMA systems operated by licensed radio amateurs pursuant to this waiver be required to comply with all other applicable Part 97 rules. Finally, such waiver would be in place only until final adjudication of ARRL's contemporaneously filed Petition for Rule Making on the same subject.

Respectfully submitted,

ARRL, the national association For Amateur Radio

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